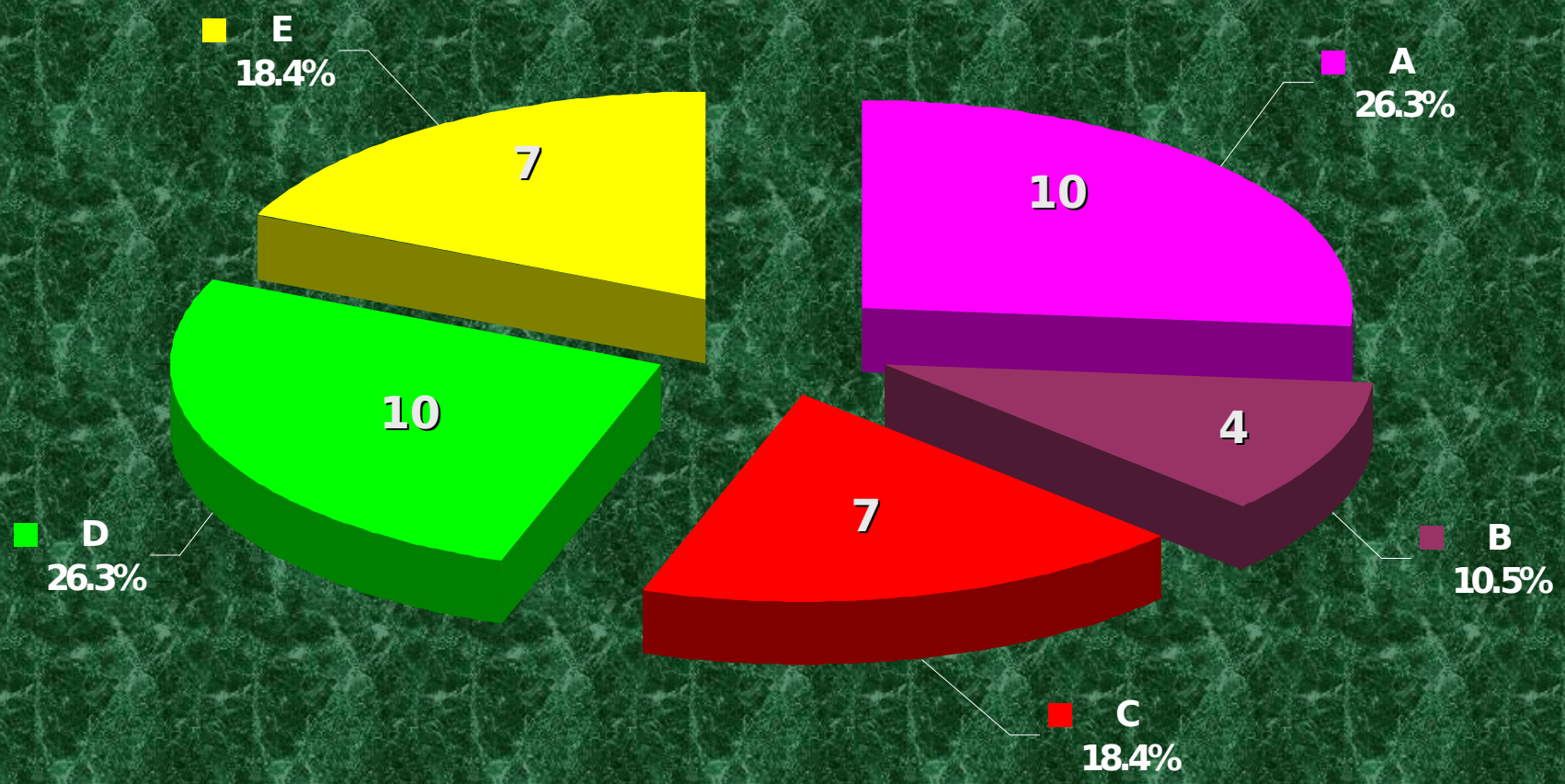
CJTF-7 Aviation Safety

Accident Classification

CLASS	NUMBER	%
A	10	26.3%
B	4	10.5%
C	7	18.4%
D	10	26.3%
E	7	18.4%
	38	100.0%

OIF Aviation Accidents (CLASSIFICATION)

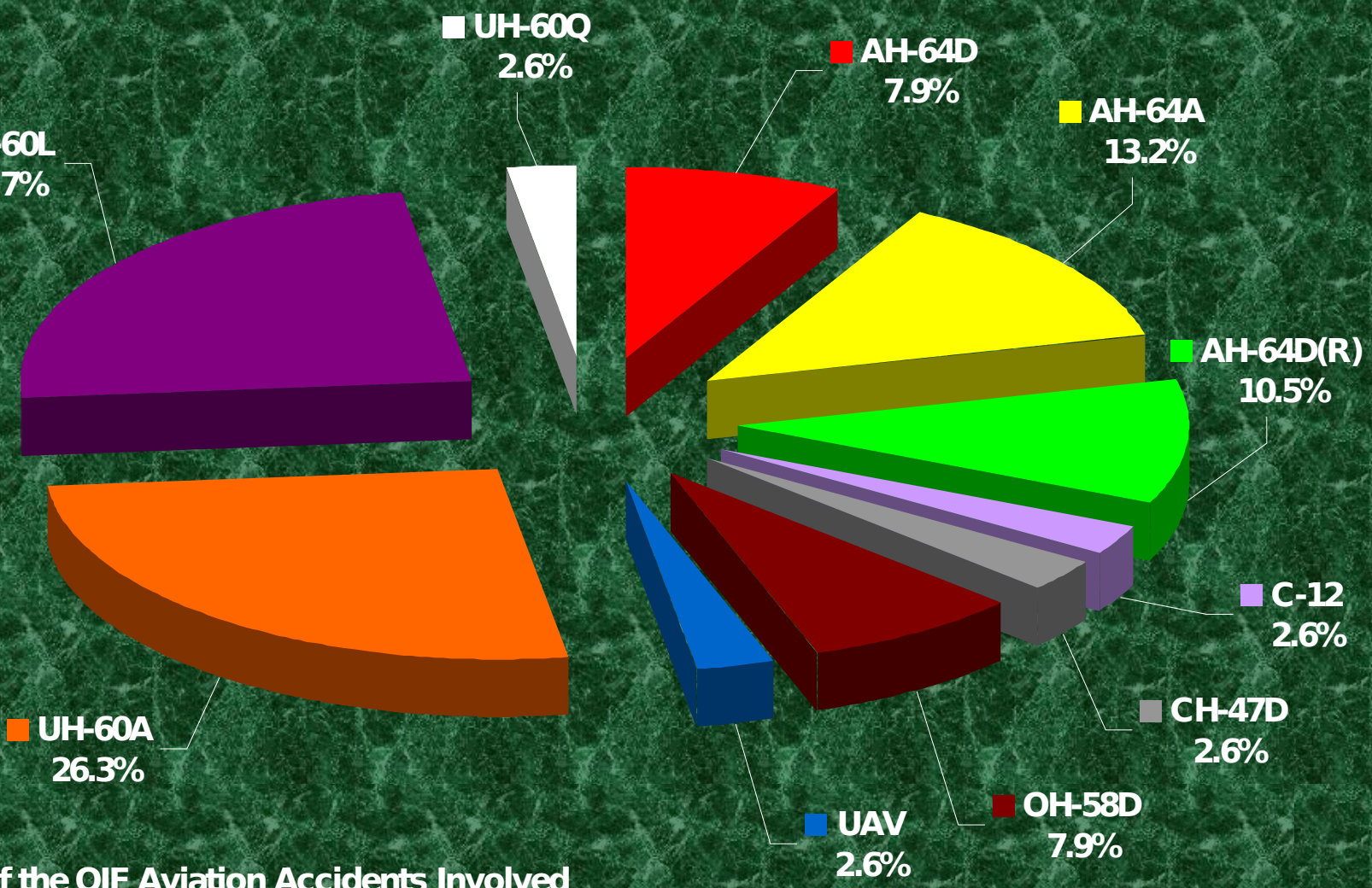


26.3% Of The OEF/OIF Aviation Accidents That Have Occurred Were Class A Events Resulting In A Total Of Seven (7) Fatalities.

Accident MTDS

MTDS	ACCIDENTS	%
C-12	1	2.6%
CH-47D	1	2.6%
UAV	1	2.6%
UH-60Q	1	2.6%
AH-64D	3	7.9%
OH-58D	3	7.9%
AH-64D(R)	4	10.5%
AH-64A	5	13.2%
UH-60L	9	23.7%
UH-60A	10	26.3%
	38	100.0%

OIF Aviation Accidents (MTDS)

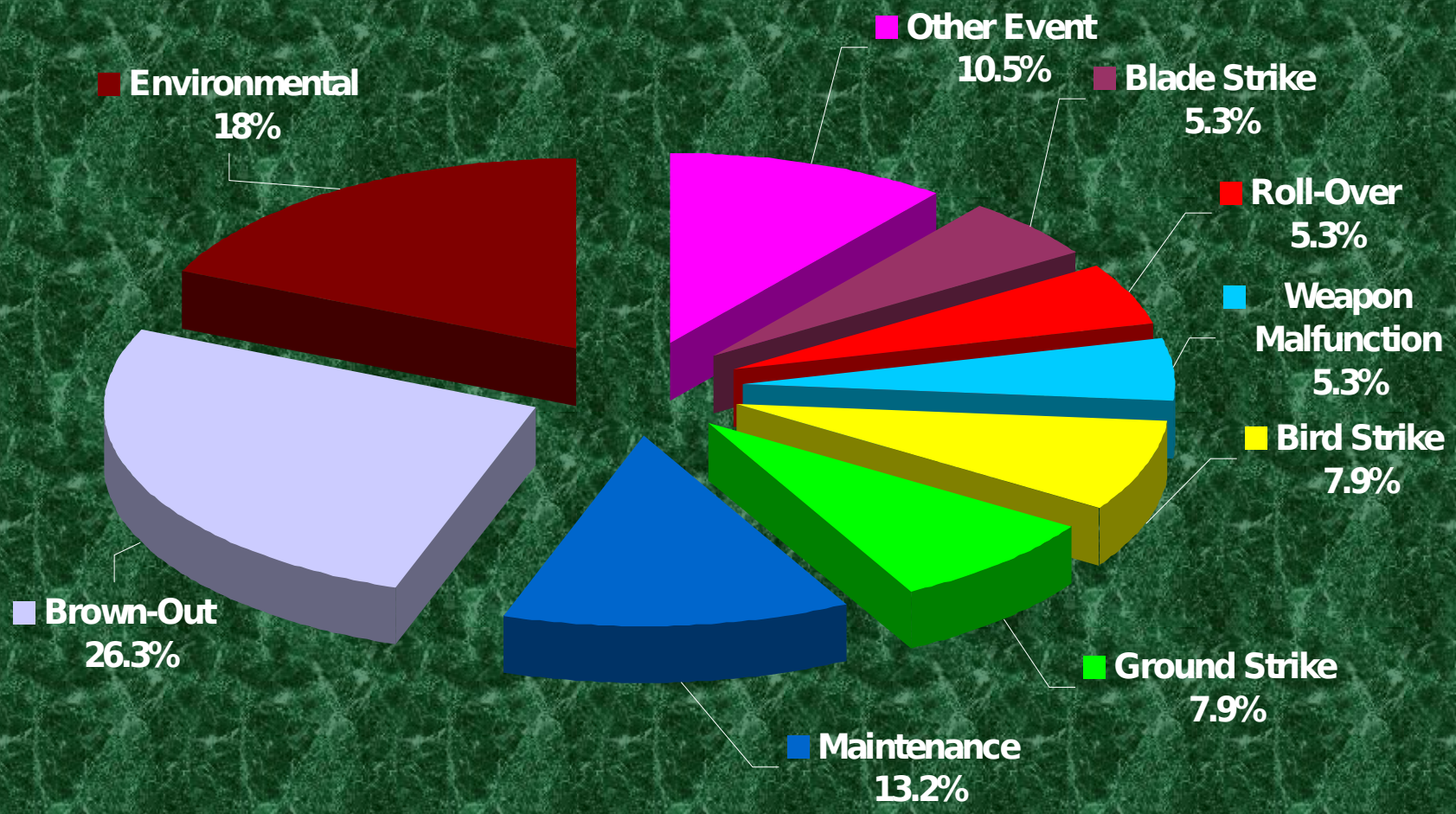


52.6% of the OIF Aviation Accidents Involved UH-60 Aircraft. 31.6% Were AH-64 Aircraft.

OIF Aviation Accidents (Primary Event)

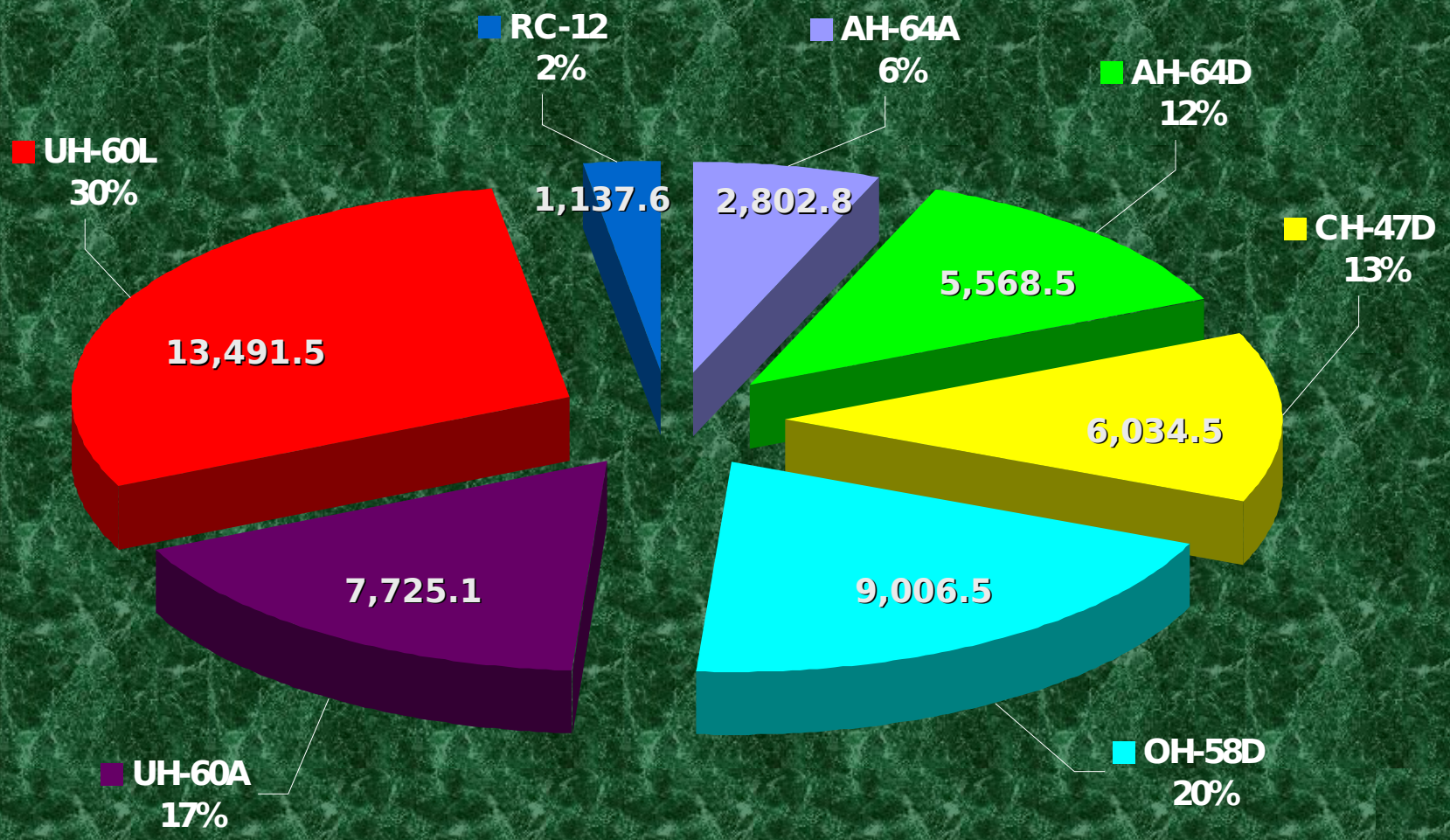
PRIMARY EVENT	ACCIDENTS	%
Blown Tire	1	2.6%
Ground Handling	1	2.6%
Lost Signal	1	2.6%
Wire Strike	1	2.6%
Blade Strike	2	5.3%
Roll-Over	2	5.3%
Weapon Malfunction	2	5.3%
Bird Strike	3	7.9%
Ground Strike	3	7.9%
Maintenance	5	13.2%
Environmental	7	18.4%
Brown-Out	10	26.3%
		100.0%

OIF Aviation Accidents (Primary Event)



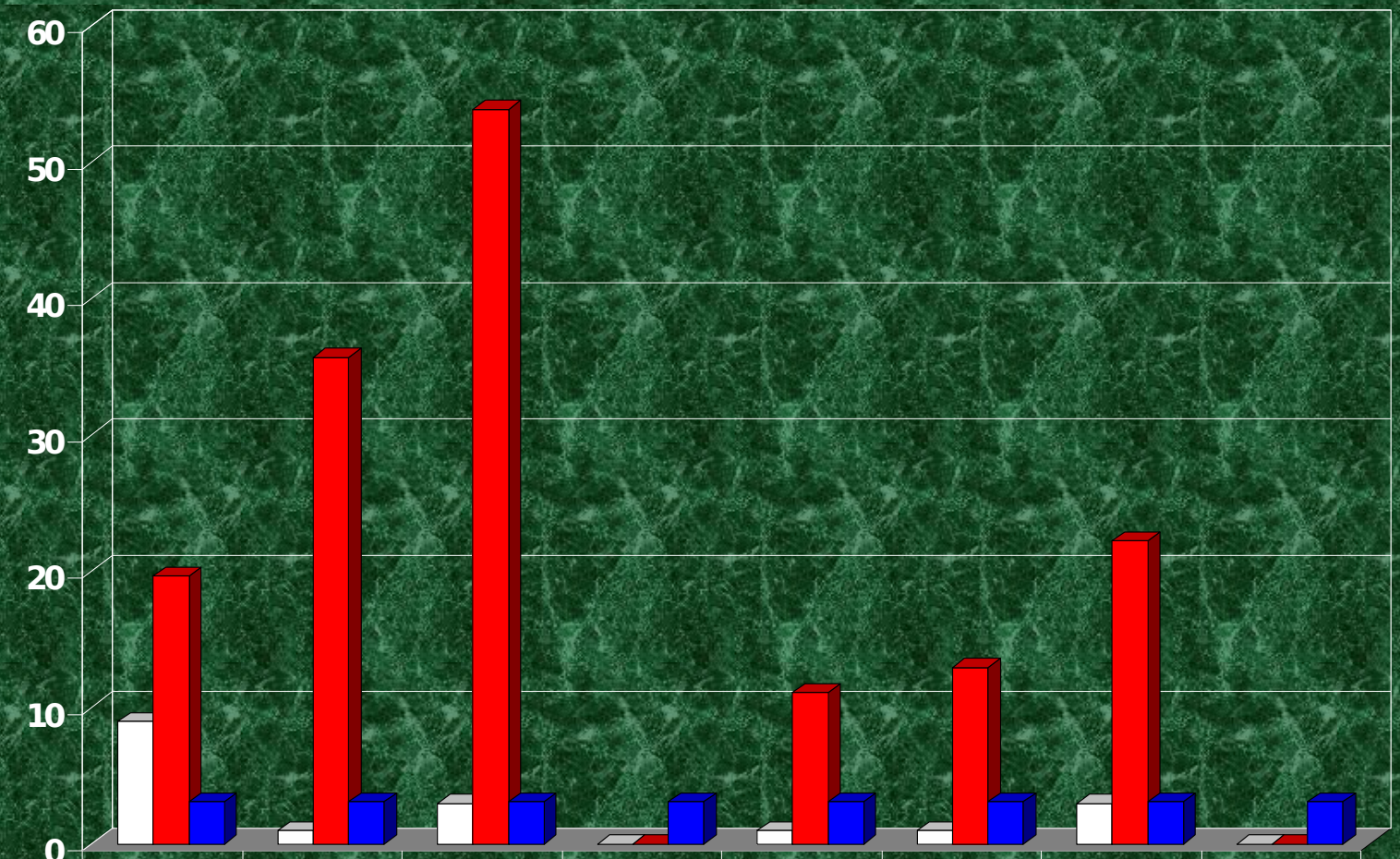
26.3% or Ten (10) OEF/OIF Aviation Accidents Involved Brown-Outs. Five (6) Class A, Two (2) Class B, One (1) Class C, and One (1) Class D.

OIF Aviation Flight Hours By Aircraft



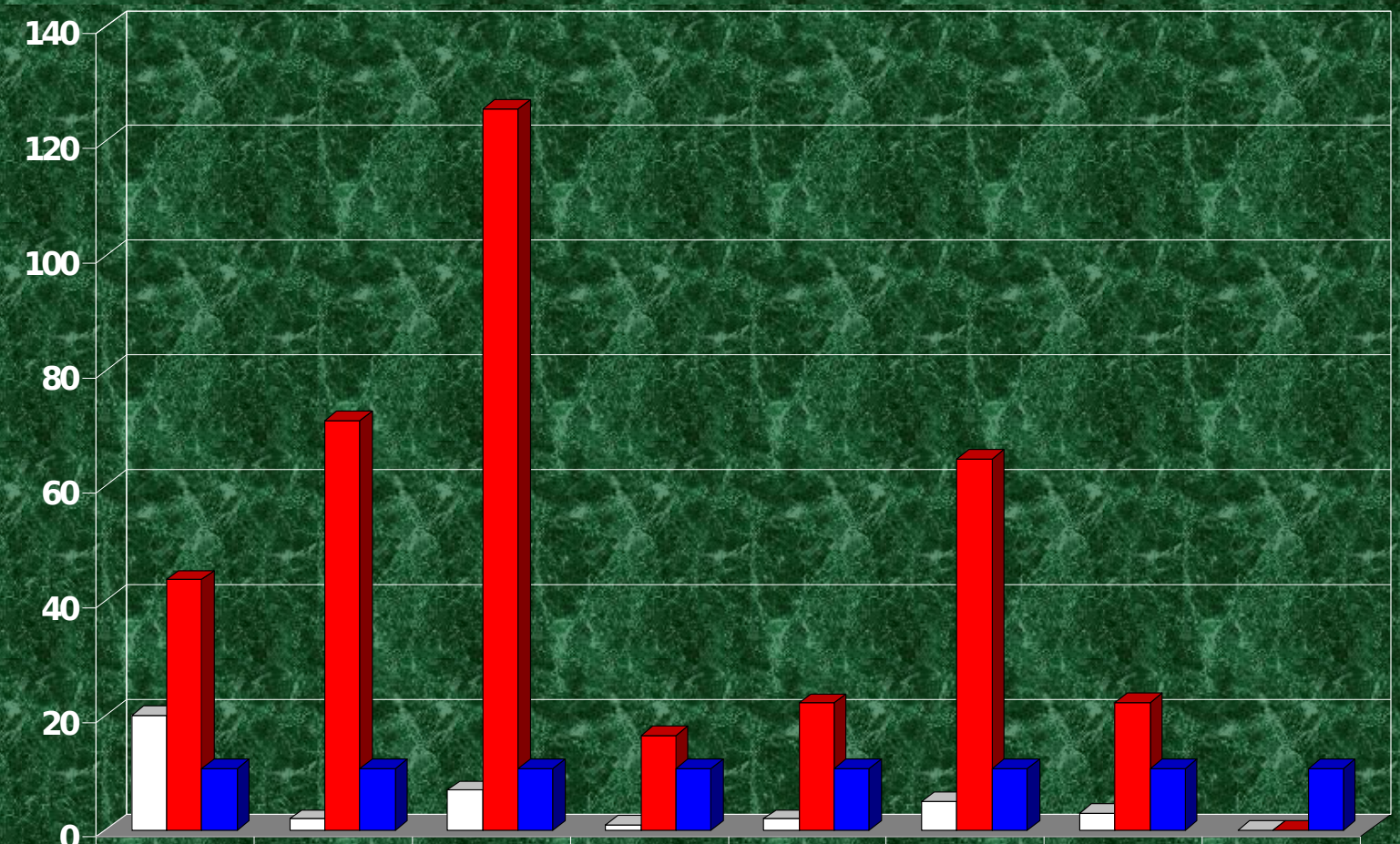
Data As Of June 03

OIF Class A Accident Rate By Aircraft



	OIF	AH-64A	AH-64D	CH-47D	OH-58D	UH-60A	UH-60L	RC-12
OIF Class A	9	1	3	0	1	1	3	0
OIF A Rate	19.67	35.68	53.87	0.00	11.10	12.94	22.24	0.00
DA A Rate	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13

OIF Class A-C Accident Rate By Aircraft



	OIF	AH-64A	AH-64D	CH-47D	OH-58D	UH-60A	UH-60L	RC-12
OIF Class A-C	20	2	7	1	2	5	3	0
OIF A-C Rate	43.70	71.36	125.71	16.57	22.21	64.72	22.24	0.00
DA A-C Rate	10.80	10.80	10.80	10.80	10.80	10.80	10.80	10.80

Aviation Safety Issue – Training

- ***ISSUE: Environmental Training***

- ***DISCUSSION: Aviation units arrived in country with aircrews at a variety of training levels. At the conclusion of Reception, Staging, Onward Movement, and Integration (RSOI), <u>the average desert experience hour level per aircrew was considered by some to be inadequate</u>. Night desert experience is a critically important factor and most aviation commanders have since concluded that our worst enemy is the environment.***

- ***RECOMMENDATION: Educate our leaders on the proper conduct of aviation RSOI. Extend the Timed Phased Force Deployment Data (TPFDD) in order to enable aviation units to RSOI over a greater period of time. Ensure RSOI is resourced with enough training areas to provide realistic training opportunities.***

UH-60 Class A Accident 25 February 2003

UH-60 Class A Accident 25 February 2003

UH-60 Class A Accident 25 February 2003

Aviation Safety Issue - Performance

- ***ISSUE: Aircraft Performance Planning Card (PPC)***

- ***DISCUSSION: Modern aircraft <u>experience performance limitations</u> based on modifications and additional equipment. Compromises must be made between fuel, ammo, and cargo based upon METT-TC. Additionally, <u>aviation units require adequate real estate</u> to occupy and conduct aviation operations. Small Tactical Assembly Areas (TAAs) with limited hardstands and only one landing direction have had <u>severe adverse impacts on aviation operations</u>.***

- ***RECOMMENDATION: Larger and better prepared TAAs are required, especially in the desert environment. Planners, leaders, and aircrews must consider environmental factors and hazards when planning and executing missions, and selecting TAAs.***

Aviation Safety Issue – NVS

- ***ISSUE: Night Vision Systems***

- ***DISCUSSION: UH-60 flights conducted <u>utilizing NVGs in the desert environment</u> under extremely low light conditions are <u>extremely challenging</u>. <u>Cockpit workload increases</u> and <u>observable limitations</u> in both communications (underutilization of HF radio capabilities) and objective area search capabilities are experienced. Integration with AH-64s using FLIR in the lead for hazard identification and in trail for weapons coverage enhanced mission performance capabilities. Pre-combat training with AH-64s while in Kuwait helped prepare UH-60 aircrews to overcome their visual limitations and helped reduced risk during combat.***

- ***Recommendation: In the absence of FLIR or other cockpit enhancements, continue to integrate and train with AH-64 aircraft taking advantage of their FLIR capabilities during low***

Aviation Safety Issue – Environment

- ***ISSUE: Sand/Dust Takeoffs and Landings***

- ***DISCUSSION: The sand and dust in central Iraq "moon dust" poses a significant hazard to aviation operations. Helicopters are landing and taking-off under IFR conditions as a result of blowing sand and dust. Brown-outs and poor environmental conditions have contributed to a significant number of accidents and damage to aircraft. Engineers attempted to mitigate the hazard at FARPs by soaking 100' x 100' landing surfaces with JP-8 and then layering them with 3" of gravel. Mobi-Matting has also been used with some success.***

- ***RECOMMENDATION: Develop and implement countermeasures to mitigate the hazards associated with blowing sand and dust conditions in the desert environment. Likewise, considerable attention must be given to future landing site selection and preparation (TAAs & FARPS) in light of the significant losses***

UH-60 FARP (Blowing Sand – Dust)

UH-60 FARP (Blowing Sand – Dust)

UH-60 FARP (Blowing Sand – Dust)

UH-60 FARP (Blowing Sand – Dust)

Aviation Safety Issue – Airfields (BIAP)

- ***ISSUE: Runway incursions at Baghdad International Airport (BIAP)***

- ***DISCUSSION: Unauthorized vehicles of all types were observed crossing the active runway at an alarming rate, averaging 3-4 daily. Both tower personnel and pilots on final approach reported single vehicles as well as convoys crossing the active runway and several aircraft were forced to abort their landing as a result of these incursions.***

- ***IMPLICATION: Runway incursions posed an imminent and extremely high risk of death or serious injury to personnel. The consequences of inadvertent contact between a large, fast moving aircraft and a ground vehicle would be catastrophic. The potential loss of life and damage to equipment would be tremendous.***

Baghdad International Airport (BIAP)

Aviation Safety Issue – Airfields (BIAP)

- ***CONTROL MEASURES:*** *Initial control measures included normal hardening of the perimeter of the runway and taxiway, posting Security Forces (SF), setting up Check Points (CP), establishing procedures for participating vehicles, erecting signs, and placing concertina wire. Unfortunately, these control measures proved ineffective for numerous reasons.*

Aviation Safety Issue – Airfields (BIAP)

- Majority of the incursions were U.S. Army Motor Vehicles (AMV) (98%), driven by non-aviation ground forces who were oblivious to the danger they posed to aviation operations.
- Extremely large concentration of centrally located (tenants/residents of the airport) and/or transient vehicles (convoys or passenger pick-ups/drop-offs).
- Vehicle access to BIAP taxiways and runways is not restricted i.e., there is no perimeter fence surrounding the runway and taxi surfaces.
- Insufficient SP forces identified and/or available to patrol the area and prevent incursions before they occurred.
- Signage and temporary barriers - the perpetrators often went around the obstacle, cut the wire, disregarded or took down the signs, or choose a direct route disregarding roads and pathways altogether.

Baghdad International Airport (BIAP)

Aviation Safety Issue – Airfields (BIAP)

- CJTF-7 Safety spearheaded the first Coalition Aviation Safety Council on 4 June 2003. All BIAP tenant activities along with personnel from the U.S. Safety Center, 439th TALCE, Air Mobility LO, CFLCC Safety, Australian Air Traffic Control, 7th Weather, and 1st AD Safety and Standardization were in attendance. The overarching issue with the continued management of the airfield in terms of operational safety was ownership. There was an existing ambiguity as to whether BIAP was "Blue" or whether it was "Green." Ownership implied responsibility, accountability, and the authority to dictate policy and dedicate resources in terms of money and personnel to resolve issues.

Baghdad International Airport (BIAP)

Aviation Safety Issue – Airfields (BIAP)

RECOMMENDATIONS

- Define airfield boundaries for aviation operations and dedicate resources to restrict access to these locations.
- Assign and resource an Airfield Commander responsible for managing the diverse aviation activities, hosting the CASC, and providing oversight of aviation related issues at BIAP.
- Assign a dedicated full-time ASO responsible for assisting the Airfield Commander manage the aviation safety program.
- Publish and distribute an APG to all BIAP tenant activities, which outlines specific requirements, rules, and procedures for airfield operations (function of ownership).

Residual Aviation Safety Issues

- **Procedures**
  - CJTF-7 Aviation Standardization & Safety Council
  - APG Staffing & Implementation
  - Communications, Corridors, WX, etc…
- **Hazards**
  - Environment (Wind, Sand, Dust) Brown-Outs
  - Obstructions (Lighting & Wires)
  - RSOI - Transition (Deployment & Reintegration)
  - Maintenance
- **Airfields & FARPS**
  - Parking – HESCO/Berms
  - Weapons/Ammunition – Loading/Unloading/Storage

Questions & Comments?